

ABSTRACT OF THE DISCLOSURE

A method for controlling programming voltage levels of non-volatile memory cells comprises: providing a resistive divider connected to a programming voltage reference and effective to generate at least one programming voltage level; and providing a reference cell crossed by a cell current. Advantageously according to an embodiment of the invention the cell current is applied to the resistive divider to correlate the programming voltage level to the intrinsic features of the reference cell. A programming voltage regulator of non-volatile memory cells comprises at least an input stage inserted between a first and a second voltage reference and connected to a reference memory cell, as well as, in correspondence with its output terminal, to a resistive divider, inserted in turn between a programming voltage reference and the second voltage reference and connected to at least an output terminal of the regulator, effective to supply the programming voltage to the non-volatile memory cells.

Advantageously according to an embodiment of the invention, the output terminal of the input stage is connected to a first circuit node of the resistive divider in correspondence with an end of a resistive element comprised in the resistive divider and having a further end connected to the programming voltage reference. In such a way, a voltage value obtained by shunting the programming voltage reference is applied at the first circuit node. The voltage regulator according to embodiments of the invention can be used in two-level contexts and in multilevel contexts, even for parallel programming of several multilevel memory cells.